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PRIVATELY FINANCED INFRASTRUCTURE PROJECTS

Draft chapters of a legislative guide on privately financed infrastructure projects

Report of the Secretary-General

Addendum

V. INFRASTRUCTURE DEVELOPMENT AND OPERATION

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LEGISLATIVE RECOMMENDATIONS

1. Subcontracting (see paras. 2-4)

1. The host country may wish to provide:

(a) That the concessionaire should have the right to enter into contracts, as necessary, for the execution of public works and the operation and maintenance of the infrastructure facility. The contracting authority should be advised of the names and qualifications of the subcontractors engaged by the concessionaire;

(b) That, notwithstanding the above, the contracting authority may reserve the right to review and approve contracts entered into by the concessionaire with its own shareholders or affiliated persons. The contracting authority's approval should not normally be withheld except where the contracts contain provisions manifestly contrary to the public interest or to mandatory rules of a public law nature.

2. Construction projects (see paras. 5-17)

2. The host country may wish to provide:

(a) That, where appropriate, the project agreement should set forth the procedures for the review and approval of construction plans and specifications by the contracting authority;

(b) That the project agreement should set forth the specific circumstances under which the contracting authority may order variations in respect of construction terms; the compensation that may be due to the concessionaire, as appropriate, to cover the additional cost entailed by the variations; the procedures for ascertaining and liquidating such costs; and the circumstances and amounts beyond which the concessionaire should no longer be under an obligation to implement the variations;

(c) That the contracting authority may, as appropriate, reserve the right to monitor the construction of, or improvements to, the infrastructure facility to ensure that they conform to the engineering standards acceptable to the contracting authority. Any suspension of the project ordered by the contracting authority should not exceed the time necessary, taking into consideration the circumstances that gave rise to the requirement to suspend the project;

(d) That the project agreements should set forth the procedures for testing and final inspection of the facility, its equipment and appurtenances. Where the law requires that the facility be accepted by the contracting authority, such acceptance should not be denied unless the work is found to be incomplete or defective.

3. Infrastructure operation (see paras. 18-46)

3. The host country may wish to provide that the project agreement should set forth, as appropriate, the extent of the concessionaire's obligations to ensure:

(a) The expansion of the service so as to meet the demand of the community or territory served;

(b) The continuity of the service, except where the provision of the service is rendered impossible by an exempting impediment, as provided in the project agreement;

(c) The availability of the service under essentially the same conditions to all users, except for reasonable differentiation between categories of users that are based on objective grounds, as provided in the project agreement;

(d) The non-discriminatory access, as appropriate, of other service providers to any public infrastructure network operated by the concessionaire, under the terms and conditions established in the project agreement.

4. Where the prices charged by the concessionaire are subject to external control by a regulatory body, the host country may wish to provide that the project agreement should set forth the mechanisms for periodic or extraordinary revisions of the price adjustment formulas.

5. The host country may wish to provide that the project agreement should set forth:

(a) The extent of the concessionaire's obligation to provide the contracting authority or a regulatory body, as appropriate, with reports and other information on its operations;

(b) The procedures for monitoring the concessionaire's performance and for the taking of such reasonable actions as the contracting authority may find appropriate, to ensure that the infrastructure facility is properly maintained and the services are provided in accordance with the applicable legal and contractual requirements.

6. The host country may wish to provide that, subject to the approval of the contracting authority, the concessionaire may issue and enforce rules governing the use of the facility.

4. Guarantees of performance and insurance (see paras. 47-58)

7. The host country may wish to provide that the project agreement should set forth:

(a) The forms, duration and amounts of the guarantees of performance that the concessionaire may be required to provide in connection with the construction and the operation of the facilities;

(b) The forms and amounts of the insurance policies that the concessionaire may be required to maintain to ensure coverage of workers' compensation, environmental damage, tort liability to the public and employees, property damage and other insurance that may be required to enable the continued operation of the facility.

5. Changes in conditions (see paras. 59-68)

8. The host country may wish to provide that the project agreement should set forth the mechanisms for revising the terms of the project agreement following the occurrence of legislative changes that affect specifically the particular project, or a class of similar projects, or privately financed infrastructure projects in general, or other changes in the economic or financial conditions that, without preventing the performance of the obligations assumed by the concessionaire, render the performance of the obligation substantially more onerous than originally foreseen.

6. Exemption provisions (see paras. 69-79)

9. The host country may wish to provide that the project agreement should set forth the circumstances under which either party may be exempt from liability for failure or delay in complying with any obligation under the project agreement, to the extent that such failure or delay has been caused by an occurrence beyond their reasonable control that causes either party to be unable to perform its obligation and that the party has been unable to overcome by the exercise of due diligence.

7. Events of default and remedies (see paras. 80-91)

10. The host country may wish to provide that the project agreement should set forth the remedies available to the contracting authority and the concessionaire in the event of default by the other party.

11. The host country may wish in particular to provide:

(a) That, in the event of serious failure by the concessionaire to perform its obligations under the project agreement, the contracting authority may temporarily take over the operation of the facility for the purpose of ensuring the effective and uninterrupted delivery of the service;

(b) That the contracting authority may enter into agreements with the lenders allowing them to appoint a new concessionaire to perform under the existing project agreement if the concessionaire seriously fails to deliver the service required under the project agreement or if other specified events occur that could justify the termination of the project agreement.

NOTES ON THE LEGISLATIVE RECOMMENDATIONS

A. General remarks

1. The conditions under which infrastructure is developed and operated may vary considerably from project to project and, therefore, it is generally not advisable to attempt to regulate by means of general legislation specific aspects of the mutual rights and obligations of the concessionaire and the contracting authority. However, in most infrastructure projects there will be issues that might need to be considered by the legislature. The contracting authority might need to be provided, for instance, with specific powers to enter into the necessary contractual arrangements for addressing certain issues in a suitable fashion. Furthermore, the Government may have an interest in ensuring predictability and coherence in the treatment of certain recurrent issues relating to the execution of privately financed infrastructure projects.

B. Subcontracting

2. Given the complexity of infrastructure projects, the concessionaire typically retains the services of one or more construction contractors for performing some or the bulk of the construction work under the project agreement. Furthermore, the concessionaire may also wish to retain the services of contractors with experience in the operation and maintenance of infrastructure during the operational phase of the project. The laws of some countries generally acknowledge the concessionaire's faculty to enter into contracts as needed for the execution of the construction work. A legislative provision recognizing the concessionaire's authority to subcontract may be particularly useful in countries where there are limitations to the ability of Government contractors to subcontract.

3. The concessionaire's freedom to hire subcontractors is in some countries restricted by rules that prescribe the use of tendering and similar procedures for the award of subcontracts by public service providers. Such statutory rules have often been adopted when infrastructure facilities were primarily or exclusively operated by the Government, with little or only marginal private sector investment. The purpose of such statutory rules was to ensure economy, efficiency, integrity and transparency in the use of public funds. However, in the case of privately financed infrastructure projects, there may no longer be a compelling reason of public interest for prescribing to the concessionaire the procedure to be followed for the award of its contracts. On the contrary, such provisions may discourage the participation of potential investors, since the project sponsors typically include engineering and construction companies that participate in the project in the expectation that they will be given the main contracts for the execution of the construction and other work.

4. The concessionaire's freedom to select its subcontractors is not unlimited, however. In some countries, the concessionaire has to identify in its proposal which contractors will be retained, including information on their technical capability and financial standing. Other countries either require that such information be provided at the time the project agreement is concluded or subject such contracts to prior review and approval by the contracting authority. The purpose of such provisions is to avoid possible conflicts of interest between the project company and its shareholders, a point that would normally also be of interest to the lenders, who may wish to ensure that the project company's contractors are not overpaid. In any event, if it is deemed necessary for the contracting authority to have the right to review and approve the project company's subcontracts, the project agreement should clearly define the purpose of such review and approval procedures and the circumstances under which the contracting authority's approval may be withheld. As a general rule, approval should not normally be withheld unless the subcontracts are found to contain provisions manifestly contrary to the public interest (e.g. excessive payments to subcontractors or unreasonable limitations of liability) or contrary to mandatory rules having the nature of public law that apply to the execution of privately financed infrastructure projects in the host country.

C. Construction projects

5. Domestic laws and regulations on traditional contracts for public works often contain extensive provisions on the execution of the work and the procedures to ensure compliance by the contractors with the design and other project specifications. Contracting authorities purchasing construction work typically act as the employer under a construction contract and retain extensive monitoring and inspection rights, including the right to review the construction project and request modifications thereof, to follow closely the construction work and schedule, to inspect and formally accept the completed work and to give final authorization for the operation of the facility.

6. In contrast, in many privately financed infrastructure projects, the contracting authority may envisage a different allocation of responsibilities between the public and the private sector. Instead of assuming the direct responsibility for managing the details of the project, contracting authorities in those countries may prefer to transfer such responsibility to the concessionaire by requiring the concessionaire to assume full responsibility for the timely completion of the construction. The concessionaire, too, will be interested in ensuring that the project is completed on time and that the cost estimate is not exceeded and will typically negotiate fixed-price, fixed-time turnkey contracts including guarantees of performance by the construction contractors. Therefore, in privately financed infrastructure projects it is the concessionaire that for most purposes performs the role of the employer under the construction contracts.

7. It flows from the above that laws and regulations governing traditional contracts for public works may not be entirely suitable for privately financed infrastructure projects. For that reason, legislative provisions on the construction of privately financed infrastructure facilities are in some countries limited to a general definition of the concessionaire's obligation to perform the public works in accordance with the provisions of the project agreement and give the contracting authority the general right to monitor the progress of the work with a view to ensuring that it conforms to the provisions of the agreement. In those countries, more detailed provisions are then left to the project agreement.

1. Review and approval of construction plans

8. Where it is felt necessary to deal with construction projects and related matters in legislation, it is advisable to devise procedures that help to keep completion time and construction costs within estimates and lower the potential for disputes between the concessionaire and the public authorities involved. For instance, where statutory provisions require that the contracting authority review and approve the construction project, the project agreement should establish a deadline for the review of the construction project and provide that the approval shall be deemed to be granted if no objections are made by the contracting authority within the relevant period. It may also be useful to set out in the project agreement the grounds on which the contracting authority may raise objections to or request modifications in the project (e.g. safety, defence, security, environmental concerns or non-conformity with the specifications).

9. It should be noted that, in some legal systems, the party exercising ultimate control over the design or specification of a construction project may bear a certain degree of liability for defects arising from the inadequacy of the approved design or specifications. Therefore, it may be advisable for the project agreement to clarify that the contracting authority does not bear any liability in that regard, except where the design and specifications were originally provided by the contracting authority itself (see also chap. III, "Selection of the concessionaire", ___).

2. Variation in the project terms

10. During the course of the construction of an infrastructure facility, it is common for situations to be encountered that make it necessary or advisable to vary certain aspects of the construction. The contracting authority may therefore wish to retain the right to order changes in respect of such aspects as the scope of construction, the technical characteristics of equipment or materials to be incorporated in the work or the construction services required under the specifications. Such changes are referred to in the *Guide* as "variations". As used in the *Guide*, the word "variation" does not include adjustments or revision of tariffs and prices because of cost changes or currency fluctuations (see paras. 32-37). Likewise, renegotiation of the project agreement in cases of substantial change in conditions (see paras. 59-68) is not regarded in the *Guide* as a variation.

11. Given the complexity of most infrastructure projects, it is not possible to exclude the need for variations in the construction specifications or other requirements of the project. However such variations often cause delay in the execution of the project or in the delivery of the public service; they may also render the performance under the project agreement more onerous for the concessionaire. Furthermore, the cost of implementing extensive variation orders may exceed the concessionaire's own financial means, thus requiring substantial additional funding that may not be obtainable at an acceptable cost. Therefore, it is advisable for the contracting authority to consider measures to control the possible need for variations. The quality of the feasibility studies conducted by the contracting authority and of the specifications provided during the selection process (see chap. III, "Selection of the concessionaire", ___) play an important role in avoiding subsequent changes in the project.

12. The concessionaire will require assurances that it will not incur additional cost or liability for delay resulting from variations sought by the contracting authority. Thus, it is advisable to require that the project agreement set forth the specific circumstances under which the contracting authority may order variations in respect of construction terms and the compensation that may be due to the concessionaire, as appropriate, to cover the additional cost entailed by the variations. The project agreement should also clarify the extent to which the concessionaire is obliged to implement those variations and whether the concessionaire may object to variations and, if so, on which grounds. Furthermore, following a contractual practice common in some legal systems, it may be advisable to provide in the project agreement that the concessionaire is released of its obligations when the amount of additional costs entailed by the modification exceeds a set maximum limit.

13. Various contractual approaches for dealing with variations have been used in large construction contracts to deal with the extent of the contractor's obligation to implement changes and the required adjustments in the contract price or contract duration.[1] Such solutions may also be used, *mutatis mutandis*, to deal with variations sought by the contracting authority under the project agreement. It should be noted, however, that, in infrastructure concessions, the project company's payment consists in user fees or prices for the output of the facility, rather than a global price for the construction work. Thus, compensation methods used in connection with infrastructure concessions sometimes include a combination of various methods ranging from lump-sum payments to tariff increases, or extensions of the concession period. For instance, there may be changes that result in an increase in the cost that the concessionaire might be able to absorb or finance itself and amortize by means of an adjustment in the tariffs or payment mechanism, as appropriate. If the concessionaire cannot refinance or fund the changes itself, the parties may wish to consider lump-sum payments as an alternative to an expensive and complicated refinancing structure.

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[1] For a discussion of approaches and possible solutions used in construction contracts for complex industrial works, see *UNCITRAL Legal Guide on Drawing Up Contracts for the Construction of Industrial Works* (United Nation publication, Sales No. E.87.V.10), chapter XXIII, "Variation clauses".

3. Monitoring powers of the contracting authority

14. In some legal systems, governmental agencies purchasing construction projects customarily retain the power to order the suspension or interruption of the projects for reasons of public interest. However, with a view to providing some comfort to potential investors, it may be useful to limit the possibility of such interference only to extraordinary circumstances and to provide that no such interruption should be of a duration or extent greater than is necessary, taking into consideration circumstances that gave rise to the requirement to suspend or interrupt the work. It may also be useful to agree on a maximum period of suspension and to provide for compensation to the concessionaire for any suspension in excess of the agreed maximum period. Furthermore, guarantees may be provided to ensure payment of compensation or to indemnify the concessionaire for loss resulting from suspension of the project (see also chap. II, "Project risks and Government support", ___).

15. Provisions concerning final inspection and approval of the construction work by the contracting authority may be of particular importance in connection with health, safety, building or labour regulations. They may also be of importance in respect of facilities that are the subject of regulatory control (for safety or similar reasons) or where the Government would have a direct or residual liability to the public for damage or injury attributable to defects in the construction of the facility.

16. The project agreement should set out in detail the nature of the completion tests or the inspection of the completed facility; the timetable for the tests (for instance, it might be appropriate to undertake partial tests over a period, rather than a single test at the end); the consequences of failure to pass a test; and the responsibility for organizing the resources for the test and covering the corresponding costs. Final approval of the work by the contracting authority is usually a condition for authorizing that the facility should be brought into operation. In some countries, it was found useful to authorize the facility to operate on a provisional basis, pending final acceptance by the contracting authority, and to provide an opportunity for the concessionaire to rectify defects that might be found at that juncture. Where regulatory or liability issues are not an immediate concern for the contracting authority, the contracting authority may satisfy itself with requiring the concessionaire to undertake those tests and to provide appropriate guarantees that the facility is fit for being put into operation.

17. For projects requiring that the facility and related assets be handed over to the contracting authority at the end of the concession period (see chap. VI, "End of project term, extension and termination", ___), such as in "build-operate-transfer" (BOT) and similar types of projects, or where the operation is handed over to the contracting authority immediately upon completion of the construction work, it is important to lay down in the project agreement the requirements to assure the long-term durability of the facility being constructed beyond the concession period. Also, the contracting authority should have assurances that it will receive all that is necessary in order to carry out the long-term operation of the facility, such as drawings, maintenance records kept during its operation by the concessionaire and any manuals that have been developed for operation and maintenance. It is also important to make provisions for adequate training of the contracting authority's personnel prior to the ultimate handing over of the facility.

D. Infrastructure operation

18. During the operational phase the concessionaire undertakes to operate and maintain the infrastructure facility and to collect revenue from the users. Conditions for the operation and maintenance of the facility, as well as for quality and safety standards, are often recited in the law and spelled out in detail in the project agreement. In countries that have general legislation on concessions, the law might, for example, limit itself to a general description of the main obligations of public service providers and refer the matter to the project agreement. Where specific legislation is required in order for the contracting authority to carry out certain types of projects, the relevant statute often sets forth the conditions for the operation and maintenance of the relevant infrastructure facilities and is supplemented by more detailed provisions in regulations governing that particular

infrastructure sector and in the project agreement, an approach that is common to various legal systems. In addition, particularly in the fields of electricity, water and sanitation and public transportation, the contracting authority or an independent regulatory body may exercise an oversight function over the operation of the facility. An exhaustive discussion of legal issues relating to the conditions of operation of infrastructure facilities would exceed the scope of the *Guide*. Therefore, the following paragraphs contain only a brief presentation of some of the main issues.

19. Regulatory provisions on infrastructure operation and legal requirements for the provision of public services are intended to achieve various objectives of public relevance. Given the usually long duration of infrastructure projects, there is a possibility that such provisions and requirements may need to be changed during the life of the project agreement. It is important, however, to bear in mind the private sector's need for a stable and predictable regulatory framework. Changes in regulations or the frequent introduction of new and more stringent rules may have a disruptive impact on the implementation of the project and compromise its financial viability. Therefore, while contractual arrangements may be agreed to by the parties to counter the adverse effects of subsequent regulatory changes (see paras. 60-63), regulatory bodies would be well advised to avoid excessive regulation or unreasonably frequent changes in existing rules.

1. General duties of public service providers

20. In various legal systems, entities providing public services have certain special obligations to their users or customers or to other public service providers. The most common such obligations are discussed below.

(a) Extension of services

21. In some legal systems, an entity operating under a governmental concession to provide certain essential services (e.g. electricity or potable water) to a community or territory and its inhabitants is held to assume an obligation to provide a service system that is reasonably adequate to meet the demand of the community or territory. That obligation often relates not only to the historic demand at the time the concession was awarded, but implies an obligation to keep pace with the growth of the community or territory served and gradually to extend the system as may be required by the reasonable demand of the community or territory. In some legal systems, the obligation has the nature of a public duty that may be invoked by any resident of the relevant community or territory. In other legal systems, it has the nature of a statutory or contractual obligation that may be enforced by the contracting authority or by a regulatory body, as the case may be.

22. The obligation, where it exists, is not absolute and unqualified. The concessionaire's duty to extend its service facilities depends, in some legal systems, upon various factors, such as the need and cost of the extension and the revenue that may be expected as a result of the extension; the concessionaire's financial condition; the public interest in effecting such an extension; and the scope of the obligations assumed by the concessionaire in that regard under the project agreement. In some legal systems, the concessionaire may be under an obligation to extend its service facilities even if the particular extension is not immediately profitable or even if, as a result of the extensions being carried out, the concessionaire's territory might eventually include unprofitable areas. That obligation is nevertheless subject to some limits, since the concessionaire is not required to carry out extensions that place an unreasonable burden on the concessionaire or its customers. Depending on the particular circumstances, the cost of carrying out extensions of service facilities may be absorbed by the concessionaire, passed on to the customers or end users in the form of price increases or extraordinary charges, or it may be absorbed in whole or in part by the contracting authority or other governmental agency by means of subsidies or grants. Given the variety of factors that may need to be taken into account in order to assess the reasonableness of any particular extension, it is advisable to require that the project agreement set forth the circumstances under which the concessionaire may be required to carry out extensions in its service facilities and the appropriate methods for financing the cost of any such extension.

(b) Continuity of service

23. Another obligation of public service providers is to ensure the continuous provision of the service under most circumstances, except for narrowly defined exempting events (see also paras. 70-73). In some legal systems, the obligation has the nature of a statutory duty that applies even if it is not expressly recited in the project agreement. The corollary of that rule, in legal systems where it exists, is that various circumstances that under general principles of contract law might authorize a contract party to suspend or discontinue the performance of its obligations (e.g. economic hardship or breach by the other party) cannot be invoked by the concessionaire as grounds for suspending or discontinuing, in whole or in part, the provision of a public service. In some legal systems, the contracting authority may even have special enforcement powers to compel the concessionaire to resume providing service in the event of unlawful discontinuance.

24. That obligation, too, is subject to a general rule of reasonableness. Various legal systems recognize the concessionaire's right to fair compensation for having to deliver the service under situations of hardship (see paras. 74-79). Moreover, in some legal systems, it is held that a public services provider may not be required to operate where its overall operation results in a loss. Where the public service as a whole, and not only one or more of its branches or territories, ceases being profitable, the concessionaire may have the right to a direct compensation by the contracting authority or, alternatively, the right to terminate the project agreement. However, termination typically requires the consent of the contracting authority or a judicial decision. It is therefore advisable to clarify in the project agreement which extraordinary circumstances would justify the suspension of the service or even release the concessionaire from its obligations under the project agreement (see also chap. VI, "End of project term, extension and termination", ___).

(c) Equal treatment of customers or users

25. Entities that provide certain services to the general public are, in some jurisdictions, under an obligation to ensure the availability of the service under essentially the same conditions to all users and customers falling within the same category. However, any differentiation based on a reasonable and objective classification of customers and users is accepted in those legal systems as long as like contemporaneous service is rendered to consumers and users engaged in like operations under like circumstances. Therefore, it may not be inconsistent with the principle of equal treatment to charge different prices or to offer different access conditions to different categories of users (e.g. domestic consumers, on the one hand, and business or industrial consumers, on the other), provided that the differentiation is based on objective criteria and corresponds to actual differences in the situation of the consumers or the conditions under which the service is provided to them. Nevertheless, where a difference in charges or other conditions of service is based on actual differences in service (e.g. higher charges for services provided at hours of peak consumption), it typically has to be commensurate with the amount of difference.

26. In addition to differentiation established by the concessionaire itself, different treatment of certain users or customers may be the result of legislative action. In many countries, the law requires that specific services must be provided at particularly favourable terms to certain categories of users and customers (e.g. discounted transport for schoolchildren or senior citizens or reduced water or electricity rates for lower-income or rural users). Public service providers may recoup these service burdens or costs in several ways, including through Government subsidies, through funds or other official mechanisms created to share the financial burden of these obligations among all public service providers, or through internal cross-subsidies from other profitable services (see chap. II, "Project risks and Government support", ___).

(d) Interconnection and access to infrastructure networks

27. Companies operating infrastructure networks in sectors such as railway transport, telecommunications or power or gas supply are sometimes required to allow other companies to have access to the network. The requirement may be set forth in the project agreement or may be stated in sector-specific laws or regulations. Interconnection and access requirements have been introduced in certain infrastructure sectors as a complement to vertical unbundling measures; in others, they have been adopted to foster competition in sectors that remained fully or partially integrated (for a brief discussion of market structure issues, see above, "Introduction and background information", ___).

28. Network operators are often required to provide access on terms that are fair and non-discriminatory from a financial as well as a technical point of view. Non-discrimination implies that the new entrant or service provider should be able to use the infrastructure of the network operator on conditions that are not less favourable than those granted by the network operator to its own services or to those of competing providers. It should be noted, however, that many pipeline access regimes, for example, do not require completely equal terms for the carrier and rival users. The access obligation may be qualified in some way. It may, for instance, be limited to spare capacity only or be subject to reasonable, rather than equal, terms and conditions.

29. While access pricing is usually cost-based, regulatory bodies will wish to retain the right to monitor access prices to ensure that they are high enough to give adequate incentive to invest in the required infrastructure and low enough to allow new entrants to compete at fair terms. Where the network operator provides services in competition with other providers, there may be requirements that its activities be separated from an accounting point of view in order to determine the actual cost of the use by third parties of the network or parts thereof.

30. Technical access conditions may be equally important, and network operators may be required to adapt their network to satisfy the access requirements of new entrants. Access may be to the network as a whole or to monopolistic parts or segments of the network (sometimes also referred to as bottleneck or essential facilities). Many Governments allow service providers to build their own infrastructure or to use alternative infrastructure where available. In such cases, the service provider may only need access to a small part of the network and cannot, under many regulations, be forced to pay more than the cost corresponding to the use of the specific facility it needs, such as the local telecommunications loop, transmission capacity for the supply of electricity or the use of a track section of railway.

2. Price control

31. Except where the concessionaire is free to determine its tariff and commercial policy, domestic laws often subject the prices charged by the concessionaire to some control mechanism. Many countries have chosen to set only the broad pricing principles in legislation while leaving their actual implementation to the regulatory body concerned and to the terms and conditions of licences or concessions. Where price control measures are used, the law typically requires that the formula must be advertised with the request for proposals and must be incorporated in the project agreement. Price control systems typically consist of formulas for the adjustment of prices and monitoring provisions to ensure compliance with the parameters for price adjustment.

(a) Price control methods

32. The most common price control methods used in domestic laws are rate-of-return and price-cap methods. There are also hybrid regimes that have elements of both. These methods are briefly discussed below.

(i) Rate-of-return method

33. Under the rate-of-return method, the price adjustment mechanism is devised so as to allow the concessionaire a given return on its investment, usually expressed in percentage terms and representing a weighted average of the cost of debt and the cost of equity. The tariffs for any given period are established on the basis of the concessionaire's overall revenue requirement to operate the facility, which involves determining its expenses, the investments undertaken to provide the services and the allowed rate of return. Reviews of the tariffs are undertaken periodically, sometimes whenever the contracting authority or other interested parties consider that the actual revenue is higher or lower than the revenue requirement of the facility. For that purpose, the contracting authority verifies the expenses of the facility, determines to what extent investments undertaken by the concessionaire are eligible for inclusion in the rate base, and calculates the revenues that need to be generated to cover the allowable expenses and the agreed-upon return on investment.

34. The implementation of the rate-of-return method requires a substantial amount of information, as well as extensive negotiations (e.g. on eligible expenditures and cost allocation). The rate-of-return method has been found to provide a high degree of security for infrastructure operators, since the concessionaire is assured that the tariffs charged will be sufficient to cover its operating expenses and allow the agreed rate of return. Because prices are adjusted regularly, thus keeping the concessionaire's rate of return essentially constant, investment in companies providing public services is exposed to little market risk. The result is typically lower costs of capital. The possible disadvantage of the rate-of-return method is that it provides little incentive for infrastructure operators to minimize their costs because of the assurance that those costs will be recovered through tariff adjustments. However, some level of incentive may exist if the tariffs are not adjusted instantaneously or if the adjustment does not apply retroactively.

(ii) Price-cap method

35. Under the price-cap method, a price formula is set for a given period (e.g. four or five years) taking into account future inflation and future efficiency gains expected from the facility. Prices are allowed to fluctuate within the limits set by the formula. In some countries, the formula is a weighted average of various indices, in others it is a consumer price index minus a productivity factor. Where substantial new investments are required, the formula may include an additional component to cover these extra costs. The formula can apply to all services of the company or to selected groups of services only, and different formulas may be used for different groups. The periodic readjustment of the formula is, however, based on the rate-of-return type of calculations, requiring the same type of detailed information as indicated above, though on a less frequent basis.

36. The implementation of the price-cap method may be less complex than the rate-of-return method. The price-cap method has been found to provide greater incentives for public service providers, since the concessionaire retains the benefits of lower than expected costs until the next adjustment period. At the same time, however, public service providers are typically exposed to more risk under the price-cap method than under the rate-of-return method. In particular, the concessionaire faces the risk of loss when the costs turn out to be higher than expected, since the concessionaire cannot raise the prices until the next price adjustment. The greater risk exposure increases the costs of capital. If the project company's returns are not allowed to rise, there might be difficulties in attracting new investment. Also, the company might be tempted to lower the quality of the service in order to reduce costs.

(iii) Hybrid methods

37. Many tariff adjustment methods being currently used combine elements of both the rate-of-return and the price-cap methods with a view to both reducing the risk borne by the service providers and providing sufficient incentives for efficiency in the operation of the infrastructure. One such hybrid method employs sliding scales

for adjusting the tariffs that ensure upward adjustment when the rate of return falls below a certain threshold and downward adjustment when the rate of return exceeds a certain maximum, with no adjustment for rates of return falling between those levels. Other possible methods include a review by the contracting authority of the investments made by the concessionaire to ensure that they meet the criteria of usefulness in order to be taken into account when calculating the concessionaire's revenue requirement. Another price adjustment technique that may be used to set prices, or more generally to monitor price levels, is benchmark or yardstick pricing. By comparing the various cost components of one public service provider with those of another and with international norms, the contracting authority may be able to judge whether tariff adjustments requested by the public service provider are reasonable.

(b) Policy considerations

38. Each of the main tariff adjustment methods discussed above has its own advantages and disadvantages that have to be taken into account by the legislature when considering the appropriateness of price control methods for the domestic circumstances. Different methods may also be used for different infrastructure sectors. Some laws indeed authorize the contracting authority to apply either a fixed-price or rate-of-return method in the selection of concessionaires, according to the scope and nature of investments and services. Whatever mechanism is chosen, it is important to consider carefully the capacity of the contracting authority to monitor adequately the performance of the concessionaire and to implement satisfactorily the adjustment method (see also chap. I, "General legislative considerations", ___).

39. It is important to bear in mind that price adjustment formulas cannot be set once and for all, as technology, exchange rates, wage levels, productivity and other factors are bound to change significantly, sometimes even unpredictably, over such periods. Therefore, many countries have established mechanisms for revision of tariff formulas, including periodic revisions (e.g. every four or five years) of the formula or ad hoc revisions whenever it is demonstrated that the formula has failed to ensure an adequate compensation to the concessionaire (see also paras. 59-68). The tariff regime will also require adequate stability and predictability to enable public service providers and users to plan accordingly and to allow financing based on a predictable revenue. Investors and lenders may be particularly concerned about regulatory changes affecting the price adjustment method. Thus, they typically require that the price adjustment formula be incorporated in the project agreement.

3. Disclosure requirements

40. Many domestic laws impose on public service providers an obligation to provide to the regulatory body accurate and timely information on their operations, and grant regulatory bodies specific enforcement rights. They may encompass inquiries and audits, including detailed performance and compliance audits, sanctions for non-cooperative companies, and injunctions or penalty procedures to enforce disclosure.

41. Public service providers are normally required to maintain and disclose to the regulatory body their financial accounts and statements and to maintain detailed cost accounting allowing the regulatory body to track various aspects of the company's activities separately. Financial transactions between the concessionaire company and affiliated companies may also require scrutiny, as concessionaire companies may try to transfer profits to non-regulated businesses or foreign affiliates. Infrastructure operators may also have detailed technical and performance reporting requirements. As a general rule, however, it is important to define reasonable limits to the extent and type of information that infrastructure operators are required to submit. Furthermore, appropriate measures should be taken to protect the confidentiality of any proprietary information that the concessionaire and its affiliated companies may submit to the regulatory body.

4. Performance standards

42. Public service providers generally have to meet a set of technical and service standards. Such standards are in most cases too detailed to figure in legislation and may be included in implementing decrees, regulations or other instruments. Service standards are often spelt out in great detail in the project agreement. They include quality standards, such as requirements with respect to water purity and pressure; ceilings on time to perform repairs; ceilings on the number of defects or complaints; timely performance of transport services; continuity in supply; and health, safety and environmental standards. Legislation may, however, impose the basic principles that will guide the drafting of detailed standards or require compliance with international standards.

43. The contracting authority typically retains the power to monitor the adherence of the project company to the regulatory performance standards. The concessionaire will be interested in avoiding as much as possible any interruption in the operation of the facility and protecting itself against the consequences of any such interruption. It will seek assurances that the exercise by the contracting authority of its monitoring or regulatory powers does not cause undue disturbance or interruption in the operation of the facility, and that it does not result in undue additional costs to the concessionaire.

5. Enforcement powers of the concessionaire

44. Governmental agencies are typically entrusted with powers designed to facilitate the provision of the service and to ensure that the users comply with the pertinent regulations and rules. Such powers may include, for instance, the right to issue, or control compliance with, safety rules and the right to suspend the provision of service for emergency or safety reasons. Those powers typically derive from the overall authority of the Government, and in some legal systems, they are inherently governmental.

45. In countries with a well-established tradition of awarding concessions for the provision of public services, the concessionaire may be entrusted with the necessary powers by a delegation of authority from the Government. The extent of powers delegated to the concessionaire is usually defined in the project agreement and may not need to be provided in detail in legislation. Nevertheless, it may be useful for the law to provide that the concessionaire may be authorized to issue rules governing the use of the facility by the public and to take reasonable measures to ensure compliance by the public with those rules. It may be advisable to provide that they should become effective upon approval by the regulatory body or the contracting authority, as appropriate. However, the right to approve operating rules proposed by the concessionaire should not be discretionary and the concessionaire should have the right to appeal a decision to refuse approval of the proposed rules (see chap. I, "General legislative considerations", ___).

46. Of particular importance for the concessionaire is the question whether the provision of the service may be discontinued because of default or non-compliance by its users. Despite the concessionaire's general obligation to ensure the continuous provision of the service (see paras. 23-24), many legal systems recognize that entities providing public services may issue and enforce rules that provide for shutting off of the service for a consumer or user who has defaulted in payment for it or who has seriously infringed the conditions for using it. The power to do so is often regarded as crucial in order to prevent abuse and ensure the economic viability of the service. However, given the essential nature of certain public services, that power may require legislative authority in some legal systems. Furthermore, there may be a number of expressed or implied limitations or conditions for the exercise of that power, such as special notice requirements and specific consumer remedies. Additional limitations and conditions may derive from the application of general consumer protection rules (see chap. VII, "Governing law", ___).

F. Performance guarantees and insurance

47. The obligations of the concessionaire are usually complemented by the provision of some form of guarantee of performance in the event of default and insurance coverage against a number of risks. The law in some countries generally requires that adequate guarantees of performance be provided by the concessionaire and refer the matter to the project agreement for further details. In other countries, the law contains more detailed provisions, for instance requiring the provision of a certain type of guarantee up to a certain percentage of the basic investment.

1. Types, functions and the nature of performance guarantees

48. Performance guarantees are generally of two types. Under one type, the monetary performance guarantee, the guarantor undertakes only to pay the contracting authority funds up to a stated limit to satisfy the liabilities of the concessionaire in the event of the latter's failure to perform. Monetary performance guarantees may take the form of a contract bond, a stand-by letter of credit or an on-demand guarantee. Under the other type of guarantee, the performance bond, the guarantor chooses one of two options: (a) to rectify defective or finish incomplete construction itself; or (b) to obtain another contractor to rectify defective or finish incomplete construction and compensate the contracting authority for losses caused by the failure to perform. The value of such an undertaking is limited to a stated amount or a certain percentage of the contract value. Under a performance bond, the guarantor also frequently reserves the option to discharge its obligations solely by the payment of money to the contracting authority. Performance bonds are generally furnished by specialized guarantee institutions, such as bonding and insurance companies. A special type of performance bond is the maintenance bond, which protects the contracting authority against future failures that could arise during the start-up or maintenance period and serve as guarantee that any repair or maintenance work during the post-completion warranty period will be duly carried out by the concessionaire.

49. As regards their nature, performance guarantees may be generally divided into independent guarantees and accessory guarantees. A guarantee is said to be "independent" if the guarantor's obligation is independent from the concessionaire's obligations under the project agreement. Under an independent guarantee (often called a first-demand guarantee) or a stand-by letter of credit, the guarantor or issuer is obligated to make payment on demand by the beneficiary, and the latter is entitled to recover under the instrument if it presents the document or documents stipulated in the terms of the guarantee or stand-by letter of credit. Such a document might be simply a statement by the beneficiary that the contractor has failed to perform. The guarantor or issuer is not entitled to withhold payment on the ground that there has in fact been no failure to perform under the main contract; however, under the law applicable to the instrument, payment may in very exceptional and narrowly defined circumstances be refused or restrained (e.g. when the claim by the beneficiary is manifestly fraudulent). In contrast, a guarantee is accessory when the obligation of the guarantor involves more than the mere examination of a documentary demand for payment in that the guarantor may have to evaluate evidence of liability of the contractor for failure to perform under the work contract. The nature of the link may vary under different guarantees, and may include the need to prove the contractor's liability in arbitral proceedings. By their nature, performance bonds have an accessory character to the underlying contract.

2. Advantages and disadvantages of various types of performance guarantee

50. From the perspective of the contracting authority, monetary performance guarantees may be particularly useful in covering additional costs that may be incurred by the contracting authority as a result of delay or default by the concessionaire. Monetary performance guarantees may also serve as an instrument to put pressure on the concessionaire to complete construction in time and to perform its other obligations in accordance with the requirements of the project agreement. However, the amount of those guarantees is typically only a fraction

of the economic value of the obligation guaranteed and is usually not sufficient to cover the cost of engaging a third party to perform instead of the concessionaire or its contractors.

51. From the perspective of the contracting authority, a first-demand guarantee has the advantage of assuring prompt recovery of funds under the guarantee, without evidence of failure to perform by the contractor or of the extent of the beneficiary's loss. Furthermore, guarantors furnishing monetary performance guarantees, in particular banks, prefer first-demand guarantees, as the conditions are clear as to when their liability to pay accrues, and the guarantors will thus not be involved in disputes between the contracting authority and the concessionaire as to whether or not there has been a failure to perform under the project agreement. Another advantage for a bank issuing a first-demand guarantee is the possibility of quick and efficient recovery of the sums paid under a first-demand guarantee by direct access to the concessionaire's assets.

52. A disadvantage to the contracting authority of a first-demand guarantee or a stand-by letter of credit is that those instruments may increase the overall project costs, since the concessionaire is usually obliged to obtain and set aside large counter-guarantees in favour of the institutions issuing the first-demand guarantee or the stand-by letter of credit. Also, a concessionaire that furnishes such a guarantee may wish to take out insurance against the risk of recovery by the contracting authority under the guarantee or the stand-by letter of credit when there has been in fact no failure to perform by the concessionaire, and the cost of that insurance is included in the project cost. The concessionaire also may include in the project cost the potential costs of any action that it may need to institute against the contracting authority to obtain the repayment of the sum improperly claimed. In addition, to the extent the contracting authority can obtain the sum payable under the guarantee or the stand-by letter of credit upon its bare statement that the concessionaire has failed to perform, the concessionaire may wish to fix the sum payable at a small percentage of the project cost, and thereby limit the loss it may suffer from having to reimburse the guarantor in the event of a claim by the contracting authority when there has been no failure to perform.

53. A disadvantage to the concessionaire of a first-demand guarantee or a stand-by letter of credit is that, if there is recovery by the contracting authority when there has been no failure to perform by the concessionaire, the latter may suffer immediate loss if the guarantor or the issuer of the letter of credit reimburses itself from the assets of the concessionaire after payment to the contracting authority. The concessionaire may also experience difficulties and delays in recovering from the contracting authority the sum improperly claimed.

54. The terms of an accessory guarantee usually require the beneficiary to prove the failure of the contractor to perform and the extent of the loss suffered by the beneficiary. Furthermore, the defences available to the debtor if it is sued for a failure to perform are also available to the guarantor. Accordingly, there is a possibility that the contracting authority will face a protracted dispute when it makes a claim under the bond. However, as a reflection of the lesser risk borne by the guarantor, which also reflects the lower cost of an accessory guarantee, the monetary limit of liability of the guarantor may be considerably higher than under a first-demand guarantee, thus covering a larger percentage of work under the project agreement. A performance bond may also be advantageous if the contracting authority cannot conveniently arrange for the rectification of faults or completion of construction itself and requires the assistance of a third party to arrange for rectification or completion. Where, however, the construction involves the use of a technology known only to the concessionaire, rectification or completion by a third person may not be feasible, and a performance bond may not have the last-mentioned advantage over a monetary performance guarantee. For the concessionaire, accessory guarantees have the advantage of preserving the concessionaire's borrowing power, since accessory guarantees, unlike first-demand guarantees and stand-by letters of credit, do not affect the concessionaire's line of credit with the lenders.

55. It flows from the above considerations that different types of guarantees may be useful in connection with the various obligations assumed by the concessionaire. While it is useful to require the concessionaire to provide

adequate guarantees of performance, it is advisable to leave it to the parties to determine the extent to which guarantees are needed and which guarantees should be provided in respect of the various obligations assumed by the concessionaire, rather than requiring in the law only one form of guarantee to the exclusion of others. It should be noted that the project company itself will require a series of performance guarantees to be provided by its contractors (see para. 6) and that additional guarantees to the benefit of the contracting authority usually increase the overall cost and complexity of a project. In some countries, practical guidance provided to domestic contracting authorities advises them to consider carefully whether and under what circumstances such guarantees are required, which specific risks or loss they should cover and which type of guarantee is best suited in each case. The ability of the project company to raise finance for the project may be jeopardized by bond requirements set at an excessive level.

56. One particular problem of privately financed infrastructure projects concerns the duration of the guarantee. The contracting authority may have an interest in obtaining guarantees of performance that remain valid during the entire life of the project, covering both the construction and the operational phase. However, given the long duration of infrastructure projects and the difficulty in evaluating the various risks that may arise, it may be problematic for the guarantor to issue a performance bond for the whole duration of the project or to procure reinsurance for its obligations under the performance bond. In practice, this problem is compounded by stipulations that the non-renewal of a performance bond constitutes a reason for a call on the bond, so that merely allowing the project company to provide bonds for shorter periods may not be a satisfactory solution. One possible solution, used in some countries, is to require separate bonds for the construction and the operation phase, thus allowing for better assessment of risks and reinsurance prospects. Such a system may be enhanced by defining in precise terms the risk to be covered during the operational period, thus allowing for a better assessment of risks and a reduction of the total amount of the bond. Another possibility to be considered by the contracting authority may be to require the provision of performance guarantees during specific crucial periods, rather than for the entire duration of the project. For instance, a bond might be required during the construction phase and last for an appropriate period beyond completion, so as to cover possible late defects. Such a bond might then be replaced by a performance bond for a certain number of years of operation, as appropriate in order for the project company to demonstrate its capability to operate the facility in accordance with the required standards. If the project company's performance proves to be satisfactory, the bond requirement might be waived for the remainder of the operation phase, up to a certain period before the end of the concession term, when the project company might be required to place another bond to guarantee its obligations in connection with the handing over of assets and other measures for the orderly wind-up of the project, as appropriate (see chap. VI, "End of project term, extension and termination", ___).

3. Insurance arrangements

57. Insurance arrangements made in connection with privately financed infrastructure projects typically vary according to the phase to which they apply, with certain types of insurance only being purchased during a particular project phase. Some forms of insurance, such as business interruption insurance, may be purchased by the concessionaire in its own interest, while other forms of insurance may be a requirement under the laws of the host country. Forms of insurance often required by law include insurance coverage against damage to the facility, third-party liability insurance, workers' compensation insurance and pollution and environmental damage insurance.

58. Mandatory insurance policies under the laws of the host country often need to be obtained from a local insurance company or from another institution admitted to operate in the country, which in some cases may pose a number of practical difficulties. In some countries, the type of coverage usually offered may be more limited than the standard coverage available on the international market, in which case the concessionaire may remain exposed to a number of perils that may exceed its self-insurance capacity. That risk is particularly serious in connection with environmental damage insurance. Further difficulties may arise in some countries as a result

of limitations on the ability of local insurers to reinsure the risks on the international insurance and reinsurance markets. As a consequence, the project company may often need to procure additional insurance outside the country, thus adding to the overall cost of financing the project.

F. Changes in conditions

59. Privately financed infrastructure projects normally last for a long period of time, during which many circumstances relevant to the project may change. The impact of many changes may be automatically covered in the project agreement, either through financial arrangements such as a tariff structure that includes an indexation clause (see paras. 33-37), or by the assumption by either party, expressly or by exclusion, of certain risks (for example, if the price of fuel or electricity supply is not taken into account in the indexation mechanisms, then the risk of higher than expected prices is absorbed by the concessionaire). However, there are changes that might not lend themselves easily to inclusion in an automatic adjustment mechanism or that the parties may prefer to exclude from such a mechanism. From a legislative perspective, two particular categories deserve special attention: legislative or regulatory changes and unexpected changes in economic conditions.

1. Legislative and regulatory changes

60. Given the long duration of privately financed infrastructure projects, the concessionaire may face additional costs in meeting its obligations under the project agreement because of future, unforeseen changes in legislation applying to its activities. In extreme cases, legislation could even make it financially or physically impossible for the concessionaire to carry on with the project. For the purpose of considering the appropriate solution for dealing with legislative changes, it may be useful to distinguish between legislative changes having a particular incidence on privately financed infrastructure projects or on one specific project, on the one hand, and general legislative changes affecting also other economic activities, and not only infrastructure operation, on the other hand.

61. All business organizations, in the private and public sectors alike, are subject to changes in law and generally have to deal with the consequences that such changes may have for business, including the impact of changes on the price of or demand for their products. Possible examples might include: changes in the structure of capital allowances that apply to entire classes of assets, whether owned by the public or private sector and whether related to infrastructure projects or not; regulations that affect the health and safety of construction workers on all construction projects not just infrastructure projects; and changes in the regulations on the disposal of hazardous substances. General changes in law may be regarded as an ordinary business risk rather than a risk specific to the concessionaire's activities, and it might be difficult for the Government to undertake to protect infrastructure operators from the economic and financial consequences of changes in legislation that affect equally other business organizations. Thus, there may not be a *prima facie* reason why the concessionaire should not bear the consequences of general legislative risks, including the risk of costs arising from changes in law applying to the whole business sector.

62. Nevertheless, it is important to take into account possible limitations in the concessionaire's capacity to respond to or absorb cost increases that result from general legislative changes. Infrastructure operators are often subject to service standards and price control mechanisms (see paras. 31-39) that make it difficult for them to respond to changes of law in the same manner as other private companies (e.g. by increasing tariffs or by reducing services). Where price control mechanisms are provided in the project agreement, the concessionaire will seek to obtain assurances from the contracting authority and the regulatory body, as appropriate, that it will be allowed to recover the additional costs entailed by changes in legislation by means of price increases. Where such an assurance cannot be given, it is advisable to empower the contracting authority to negotiate with the

concessionaire the compensation to which the concessionaire might be entitled in the event that price control measures do not allow for full recovery of the additional costs generated by general legislative changes.

63. A different situation arises when the concessionaire faces increased costs as a result of specific legislative changes that target the particular project, a class of similar projects or privately financed infrastructure projects in general. Such changes cannot be regarded as an ordinary business risk and may significantly alter the economic and financial assumptions under which the project agreement was negotiated. Thus, the contracting authority often agrees to bear the additional cost resulting from specific legislation that targets the particular project, a class of similar projects or privately financed infrastructure projects in general. For example, in highways projects, legislation aimed at a specified road project or road operating company, or at that class of privately operated road projects, might result in a price adjustment under the relevant provisions in the project agreement.

2. Changes in economic conditions

64. Some legal systems have rules that allow a revision of the terms of the project agreement following changes in the economic or financial conditions that, without preventing the performance of a party's contractual obligations, render the performance of those obligations substantially more onerous than originally foreseen at the time they were entered into. In some legal systems, the possibility of a revision of the terms of the agreement is generally implied in all Government contracts, or is expressly provided for in the relevant legislation.

65. The financial and economic considerations for the concessionaire's investment are negotiated in the light of assumptions based on the circumstances prevailing at the time of the negotiations and the reasonable expectations of the parties as to how those circumstances will evolve during the life of the project. Given the long duration of infrastructure projects, the concessionaire will seek to negotiate mechanisms that provide some protection against the adverse financial and economic impact of extraordinary and unforeseen events that could not have been taken into account when the project agreement was negotiated or mechanisms that, had they been taken into account, would have resulted in a different risk allocation or consideration for the concessionaire's investment. As a consequence, revision rules have been applied in a number of countries and have been found useful to help the parties find equitable solutions for ensuring the continued economic and financial viability of infrastructure projects, thus averting a disruptive failure of performance by the concessionaire. However, revision rules may also have some disadvantages, particularly from the perspective of the Government.

66. As with general legislative changes, changes in economic conditions are risks to which most business organizations are exposed without having recourse to a general guarantee of the Government that would protect them against the economic and financial effects of those changes. An unqualified obligation of the contracting authority to compensate the concessionaire for changes of economic conditions may result in a reversion to the public sector of a substantial portion of the commercial risks originally allocated to the concessionaire and represent an open-ended financial liability. Furthermore, it should be noted that the proposed tariff level and the essential elements of risk allocation are important if not decisive factors in the selection of the concessionaire. An excessively generous recourse to renegotiation of the project may lead to unrealistically low proposals being submitted during the selection procedure in the expectation of tariff increases once the project has been awarded. Thus, the contracting authority may have an interest in establishing reasonable limits for statutory or contractual provisions authorizing revisions of the project agreement following changes in economic conditions.

67. It may be desirable to provide in the project agreement that a change in circumstances that justifies a revision of the project agreement must have been beyond the control of the concessionaire and of such a nature that the concessionaire could not reasonably be expected to have taken it into account at the time the project

agreement was negotiated or to have avoided or overcome its consequences. For example, a tollroad operator holding an exclusive concession (see chap. IV, "The project agreement", ___) might not be expected to take into account and assume the risk of traffic shortfalls brought about by the subsequent opening of an alternative toll-free road by an entity other than the contracting authority. However, the concessionaire would normally be expected to take into account the possibility of reasonable labour cost increases over the life of the project. Thus, under normal circumstances, the fact that wages turned out to be higher than expected would not be sufficient reason for revising the project agreement.

68. It may also be desirable to provide in the project agreement that a request for revision of the project agreement requires that the alleged changes of economic and financial conditions amount to a certain minimum value in proportion to the total project cost or the concessionaire's revenue. Such a rule might be useful to avoid cumbersome adjustment negotiations for small changes until the changes have accumulated to comprise a significant figure. In some countries, there are rules that establish a ceiling for the cumulative amount of periodic revisions of the project agreement. The purpose of such rules is to avoid the misuse of the change mechanism as a means for achieving an overall financial balance that bears no relation to the one contemplated in the original project agreement. From the perspective of the concessionaire and the lenders, however, such limitations may represent a considerable risk exposure in the event, for instance, of dramatic cost increases resulting from an extraordinarily severe change of circumstances. Therefore, the desirability of introducing such a ceiling, and the appropriate amount, should be carefully considered.

G. Exemption provisions

69. During the life of an infrastructure project, events may occur that impede the performance by a party of its contractual obligations. The events causing such impediment are typically outside either party's control and may be of a physical nature, such as a natural disaster, or may be the result of human action, such as war, riots or terrorist attacks. Many legal systems generally recognize that a party that fails to perform a contractual obligation because of the occurrence of certain types of events may be exempted from the consequences of such failure to perform.

1. Definition of exempting events

70. Exempting circumstances typically include occurrences beyond the control of a party that cause the party to be unable to perform its obligation and that the party has been unable to overcome by the exercise of due diligence. Common examples include the following: natural disasters (e.g. cyclones, floods, droughts, earthquakes, storms, fires or lightning); war (whether declared or not) or other military activity, including riots and civil disturbance; failure or sabotage of facilities, acts of terrorism, criminal damage or the threat of such acts; radioactive or chemical contamination or ionizing radiation; effects of the natural elements, including geological conditions that cannot be foreseen and resisted; and employees' strikes of exceptional importance.

71. Some laws make only a general reference to exempting circumstances, whereas other laws contain extensive lists of circumstances that excuse the parties from performance under the project agreement. The latter technique may serve the purpose of ensuring a consistent treatment of the matter for all projects developed under the relevant legislation, thus avoiding situations where one concessionaire obtains a more favourable allocation of risks than that provided in other project agreements. However, it is important to consider the possible disadvantages of setting forth in statutory or regulatory provisions a list of events that are to be considered exempting impediments for all cases. There is a risk that the list might be incomplete, leaving out important impediments. Furthermore, certain natural disasters, such as storms, cyclones and floods, may be normal conditions at a particular time of the year at the project site. As such, those natural disasters may represent risks that any public service provider acting in the region would be expected to assume.

72. Another aspect that may need to be carefully considered is whether and to what extent certain acts of governmental agencies other than the contracting authority may constitute exempting impediments. The concessionaire may be required to secure a licence or other official approval for the performance of certain of its obligations. The project agreement might thus provide that, if the licence or approval is refused, or if it is granted but later withdrawn, because of the concessionaire's own failure to meet the relevant criteria for the issuance of the licence or approval, cannot rely on the refusal as an exempting impediment. However, if the licence or approval is refused or withdrawn for extraneous or improper motives, it would be equitable to provide that the concessionaire may rely on the refusal as an exempting impediment. A further possibility of impediment might be an interruption of the project brought about by an organ of the Government other than the contracting authority, for instance, because of changes in governmental plans and policies that require the interruption or major revision of the project that affect substantially the original design. In such situations, it may be important to consider the institutional relationship between the contracting authority and the governmental agency that brings about the impediment as well as their degree of independence from one another. An event classified as an exempting impediment may in some cases amount to an outright breach of the project agreement by the contracting authority depending on whether the contracting authority could reasonably control or influence the acts of the other governmental agency.

73. In the light of the above, it is advisable to identify in the project agreement the circumstances that exempt either party from performance under that agreement, so as to give the parties the necessary freedom to find suitable arrangements. In order to avoid practical controversies, the project agreement should also clarify whether exempting circumstances produce automatic effects or whether their occurrence needs to be established by the parties using a special procedure.

2. Consequences for the parties

74. In some legal systems, the occurrence of an exempting circumstance suspends the execution of the project or the operation of the concession for the duration of the impediment. In other legal systems, the project agreement is not technically suspended, but if the circumstances are such that the concessionaire is rendered unable to comply with its obligations under the project agreement, such inability is not construed as being a breach of the project agreement. The main issues to be considered in connection with the occurrence of any exempting event are whether additional time is granted for the performance of the obligation, and which party bears the cost entailed by the delay or the cost of repairing damaged property.

75. During the construction phase, the occurrence of exempting circumstances usually justifies an extension of the time allowed for the completion of the facility. In that connection, it is important to consider the implications of any such extension for the overall duration of the project, particularly where the construction phase is taken into account for calculating the total concession period. Delays in the completion of the facility reduce the operational period and may adversely affect the global revenue estimates of the concessionaire and the lenders. It may therefore be advisable to consider under what circumstances it may be justified to extend the concession period so as to take into account possible extensions that occur during the construction phase. Lastly, it is advisable to provide that, if the event in question is of a permanent nature, the parties may have the option to terminate the project agreement (see also chap. VI, "End of project term, extension and termination", ___).

76. Another important question is whether the concessionaire will be entitled to compensation for revenue loss or property damage that results from the occurrence of exempting circumstances. The answer to that question is given by the risk allocation provided in the project agreement. Except for cases in which the Government provides some form of direct support (see chap. II, "Project risks and government support", ___), privately financed infrastructure projects are typically undertaken at the concessionaire's own risk, including the risk of losses that may result from natural disasters and other exempting circumstances, against which the

concessionaire is usually required to procure adequate insurance coverage (see paras. 57-58). Thus, some laws expressly exclude any form of compensation to the concessionaire in the event of loss or damage that results from the occurrence of exempting circumstances. It does not necessarily follow, however, that an event qualified as an exempting circumstance may not, at the same time, justify a revision of the terms of the project agreement so as to restore its economic and financial balance (see also paras. 59-68).

77. However, a different type of risk allocation is sometimes contemplated for projects involving the construction of facilities that are permanently owned by the contracting authority or facilities that are required to be transferred to the contracting authority at the end of the project period. In some countries, the contracting authority is authorized to make arrangements for assisting the concessionaire to repair or rebuild infrastructure facilities damaged by natural disasters or similar occurrences defined in the project agreement, provided that the possibility of such assistance was contemplated in the request for proposals. Sometimes the contracting authority is authorized to agree to pay compensation to the concessionaire in case of an interruption of the work for more than a certain number of days up to a maximum time limit, if the interruption is caused by an event for which the concessionaire is not responsible.

78. Should the concessionaire become unable to perform because of any such impediment, and should the parties fail to achieve an acceptable revision of the contract, some national laws authorize the concessionaire to terminate the project agreement, without prejudice to the compensation that might be due under the circumstances (see chap. VI, "End of project term, extension and termination", ___).

79. Statutory and contractual provisions on exempting circumstances also need to be considered in the light of other rules governing the provision of the service concerned. The law in some legal systems requires public service providers to make best efforts to continue providing the service despite the occurrence of circumstances defined as contractual impediments (see paras. 23-24). In those cases, it is advisable to consider the extent to which such an obligation may reasonably be imposed on the concessionaire and what compensation may be due for the additional costs and hardship faced by it.

H. Events of default and remedies

80. Generally, there is a wide range of remedies that the parties may agree on to deal with the consequences of default, culminating with termination. The present section discusses general considerations on events of default and remedies by either party (see paras. 81-82). It considers the legislative implication of certain types of remedies intended to rectify the causes of default and preserve the continuity of the project, in particular the intervention of the contracting authority (see paras. 83-86) or the substitution of the concessionaire (see paras. 87-91). The ultimate remedy of terminating the project agreement, and the consequences that result from termination, are discussed elsewhere in the *Guide* (see chap. VI, "End of project term, extension and termination", ___).

1. General considerations on failures to perform and remedies

81. The remedies for default by the concessionaire typically include those that are customary in construction or long-term services contracts such as forfeiture of guarantees, contractual penalties and liquidated damages.[2] In most cases, such remedies are typically contractual in nature and do not give rise to significant legislative considerations. Nevertheless, it is important to establish adequate procedures for ascertaining failures and giving opportunity for rectifying such failures. In some countries, the imposition of contractual penalties requires

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[2]For a discussion of remedies used in construction contracts for complex industrial works, see *UNCITRAL Legal Guide on Drawing Up Contracts for the Construction of Industrial Works* ..., chapter XVIII, "Delay, defects and other failures to perform".

findings of official inspections and other procedural steps, including the review of the contracting authority by senior officials prior to the imposition of more serious sanctions. Those procedures may be complemented by provisions distinguishing between defects that can be rectified and those that cannot, and setting down the corresponding procedures and remedies. It is usually advisable to require that the concessionaire be given notice requiring it to remedy the breach within a sufficient period. It may also be advisable to contemplate the payment of penalties or liquidated damages by the concessionaire in the event of breach to perform essential obligations and to clarify that no penalties apply in case of breach of secondary or ancillary obligations and for which other remedies may be obtained under national law. Furthermore, a performance monitoring system contemplating penalties or liquidated damages may be complemented by a scheme of bonuses payable to the concessionaire for improving over agreed terms.

82. While the contracting authority may protect itself against the consequences of default by the concessionaire through a variety of judicially enforceable contractual arrangements, the remedies available to the concessionaire may be subject to a number of limitations under the applicable law. Important limitations may derive from rules of law that recognize the immunity of governmental agencies from judicial suit and enforcement measures. Depending on the legal nature of the contracting authority or of other governmental agencies that assume obligations vis-à-vis the concessionaire, the latter may be deprived of the possibility of enforcing measures of execution to secure the fulfilment of obligations entered into by those public entities (see also chap. VII, "Settlement of disputes", ___). This situation makes it the more important to provide mechanisms to protect the concessionaire against the consequences of default by the contracting authority, for example by means of governmental guarantees covering specific events of default or guarantees provided by third parties, such as multilateral lending institutions (see also chapter II, "Project risks and government support", ____).

2. Step-in rights for the contracting authority

83. Some national laws expressly authorize the contracting authority to temporarily take over the operation of the facility, normally in case of failure to perform by the concessionaire, in particular where the contracting authority has a statutory duty to ensure the effective delivery at all times of the service concerned. In some legal systems, such a prerogative is considered to be inherent in most Government contracts and might be presumed to exist even without being expressly mentioned in legislation or in the project agreement.

84. It should be noted that the contracting authority's right to intervene, its "step-in right", is an extreme measure. Private investors may fear that the contracting authority may use it, or threaten to use it, in order to impose its own desires about the way in which the service is provided, or even to get control of the project assets. It is therefore advisable to define as clearly as possible the circumstances in which step-in rights can be exercised. It may be useful to clarify in the law that the contracting authority's intervention in the project is temporary and is intended to remedy a specific, urgent problem that the concessionaire has failed to remedy. The concessionaire should resume responsibility for service delivery once the emergency situation has been remedied. It is important to reserve the contracting authority's right to intervene to cases of severe failures of service and not merely in case of dissatisfaction about the concessionaire's performance.

85. The contracting authority's ability to step in may be limited in that it may be difficult immediately to identify and engage a subcontractor to carry out the actions that the contracting authority is stepping in to do. Furthermore, frequent interventions carry a risk of the reversion to the contracting authority of risks that have been transferred in the project agreement to the concessionaire. The concessionaire should not rely on the contracting authority to step in to deal with a particular risk instead of handling it itself, as required by the project agreement.

86. It is advisable to clarify in the project agreement which party bears the cost of an intervention by the contracting authority. In most cases, the concessionaire should bear the costs incurred by the contracting authority when the intervention is prompted by a performance failure attributable to the concessionaire's own fault. In some cases, to prevent disputes about liability and about the appropriate level of costs, the agreement may authorize the contracting authority to take steps to remedy the problem itself, and then charge the actual cost of having done so (including its own administrative costs) to the concessionaire. However, when such intervention takes place following the occurrence of an exempting impediment (see paras. 69-79), the parties might agree on a different solution, depending on how that particular risk has been allocated in the project agreement.

3. Step-in rights for the lenders and compulsory transfer of the concession

87. During the life of the project situations may arise where, because of default by the concessionaire or the occurrence of an extraordinary event outside of the concessionaire's control, it might be in the interest of the parties to avert termination of the project (see chap. VI, "End of project term, extension and termination", ___) by allowing the project to continue under the responsibility of a different concessionaire. The lenders, whose main security is the revenue generated by the project, are particularly concerned about the risk of interruption or termination of the project prior to repayment of the loans. In the event of default of or an impediment affecting the concessionaire, the lenders will be interested in ensuring that the work will not be left incomplete and that the concession will be operated profitably. The contracting authority, too, may be interested in allowing the project to be carried out by a new concessionaire, as an alternative for having to take it over and continue it under its own responsibility.

88. Clauses allowing the lenders to select, with the consent of the contracting authority, a new concessionaire to perform under the existing project agreement have been included in a number of recent agreements for large infrastructure projects. Such clauses are typically supplemented by a direct agreement between the contracting authority and the lenders who are providing finance to the concessionaire. The main purpose of such a direct agreement is to allow the lenders to avert termination by the contracting authority when the concessionaire is in default by substituting a concessionaire that will continue to perform under the project agreement in place of the concessionaire in default. Unlike the contracting authority's right to intervene, which relates to a specific, temporary and urgent failure of the service, lenders' step-in rights are for cases where the concessionaire's failure to provide the service is recurrent or apparently irremediable.

89. In the experience of countries that have recently made use of such direct agreements, it has been found that the ability to head off termination and provide an alternative concessionaire gives the lenders additional security against default by the concessionaire. At the same time, it provides the contracting authority an opportunity to avoid the disruption entailed by terminating the project agreement, thus maintaining continuity of service. In countries where the lenders may obtain a security interest over the entirety of the concessionaire's rights and interests under the project agreement (see chap. IV, "The project agreement", ___), there may be an implied step-in right, whenever a particular situation constitutes an event of default under the loan agreements.

90. However, in some countries, the implementation of such clauses may face difficulties in the absence of legislative authorization. The concessionaire's inability to carry out its obligations is usually a ground for the contracting authority to take over the operation of the facility or terminate the agreement (see chap. VI, "End of project term, extension and termination", ___). For the purpose of selecting a new concessionaire to succeed the defaulting one, the contracting authority often needs to follow the same procedures that applied to the selection of the original concessionaire, and it might not be possible for the contracting authority to agree in consultation with the lenders on engaging a new concessionaire that has not been selected pursuant to those procedures. On the other hand, even where the contracting authority is authorized to negotiate with a new

concessionaire under emergency conditions, a new project agreement might need to be entered into with the new concessionaire and there may be limitations for its ability to assume obligations of its predecessor.

91. Therefore, it may be useful to acknowledge in the law the contracting authority's right to enter into agreements with the lenders allowing them to appoint a new concessionaire to perform under the existing project agreement, when the concessionaire seriously fails to deliver the service required under the project agreement, or following the occurrence of other specified events that could justify the termination of the project agreement. The agreement between the contracting authority and the lenders should, *inter alia*, specify the following: the circumstances in which the lenders are permitted to substitute a new concessionaire; the procedures for the substitution of the concessionaire; the grounds for refusal by the contracting authority of a proposed substitute; and the obligations of the lenders to maintain the service at the same standards and on the same terms as required by the project agreement.